SOFTWARE REQUIREMENT SPECIFICATIONS

Project Topic: *Dzongkha Proverbs*

Submitted by:

12190058 Karma Yangzom

1. **Introduction**
   a. **Purpose**

   The purpose of the Software Requirements Specification document is to provide the detailed overview that describes hardware and software requirements of "Dzongkha Proverbs" android application.

   b. **Scope**

   Dzongkha Proverbs is an android application which will include the following features:

   - Proverbs (དཔེ་གཏམ།)
   - Favourite (དཔེ་གཏམ་དགའ་ཤོས།)
   - Search
   - Share
   - Exit

   The Dzongkha Proverbs application is mainly for the Bhutanese people who want to know and learn Dzongkha proverbs easily.

2. **Requirements**
   a. **Functional Requirements**
      i. **Describe each feature of your application**

      The Dzongkha Proverbs application will consist of the following features:

      - The user can view the Dzongkha proverbs with its meaning.
      - The user can be able to mark the Dzongkha proverbs as their favourite and also remove the marked Dzongkha proverbs from favourite.
      - The user can search for the Dzongkha proverbs of their choice by entering Dzongkha keywords.
      - The user can share the Dzongkha proverbs.

b. Non-functional Requirements

The non-functional requirements of the Dzongkha Proverbs application are:

- Usability: The users will be provided with the direction and naming conventions properly written with icons of the feature so that they will able to use the application easily.
- Portability: The application will be portable in different versions of android and it is independent of the size of any android phone and tablets.
- The application will work offline.

c. Software Requirements

   i. The technology used and version

      For developer

- Java SE JDK 8 and above:
  The Java development kit lays the foundation for the Android SDK.
- Android Studio version 4 and above
- Android SDK-25 and above:
  Included in Android Studio and provides access to Android libraries.
- Operating System: Windows or Ubuntu
- SQLite version 3.35.3:
  SQLite is a Relational Database Management System (RDBMS) which uses SQL specifications.
- DB browser version 3.12.1:
  It is a high quality, visual, open source tool to create, design and edit database files compatible with SQLite.

3. Hardware Requirements

For developer:

- Laptop with minimum 4GB RAM, 8GB RAM recommended
- 2.00GHz*4 Processor
- 1280 x 800 minimum screen resolution
- Android Smartphone to use as an emulator

For users:

- Android smartphone
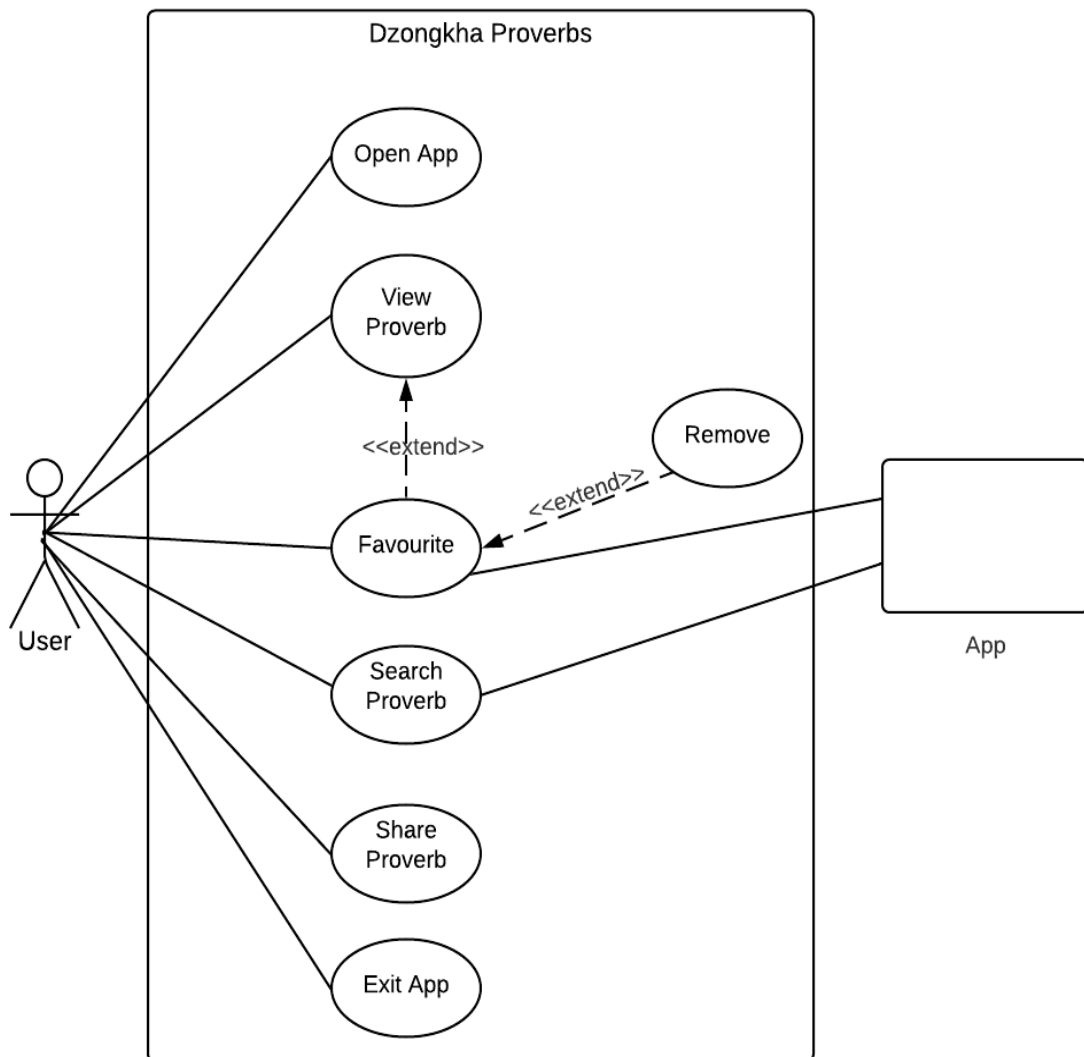
4. System Designs

a. Use case Diagram

Figure 1: Use case Diagram

Use case diagram represents the user's interaction with the system and the relationship between the user and the different use cases. Figure 1 shows the use case diagram of the Dzongkha Proverbs application. There are two identified actors, namely User and System (App). The functionalities of the actors are: View Proverb, Favourite, Search Proverb and Share Proverb.
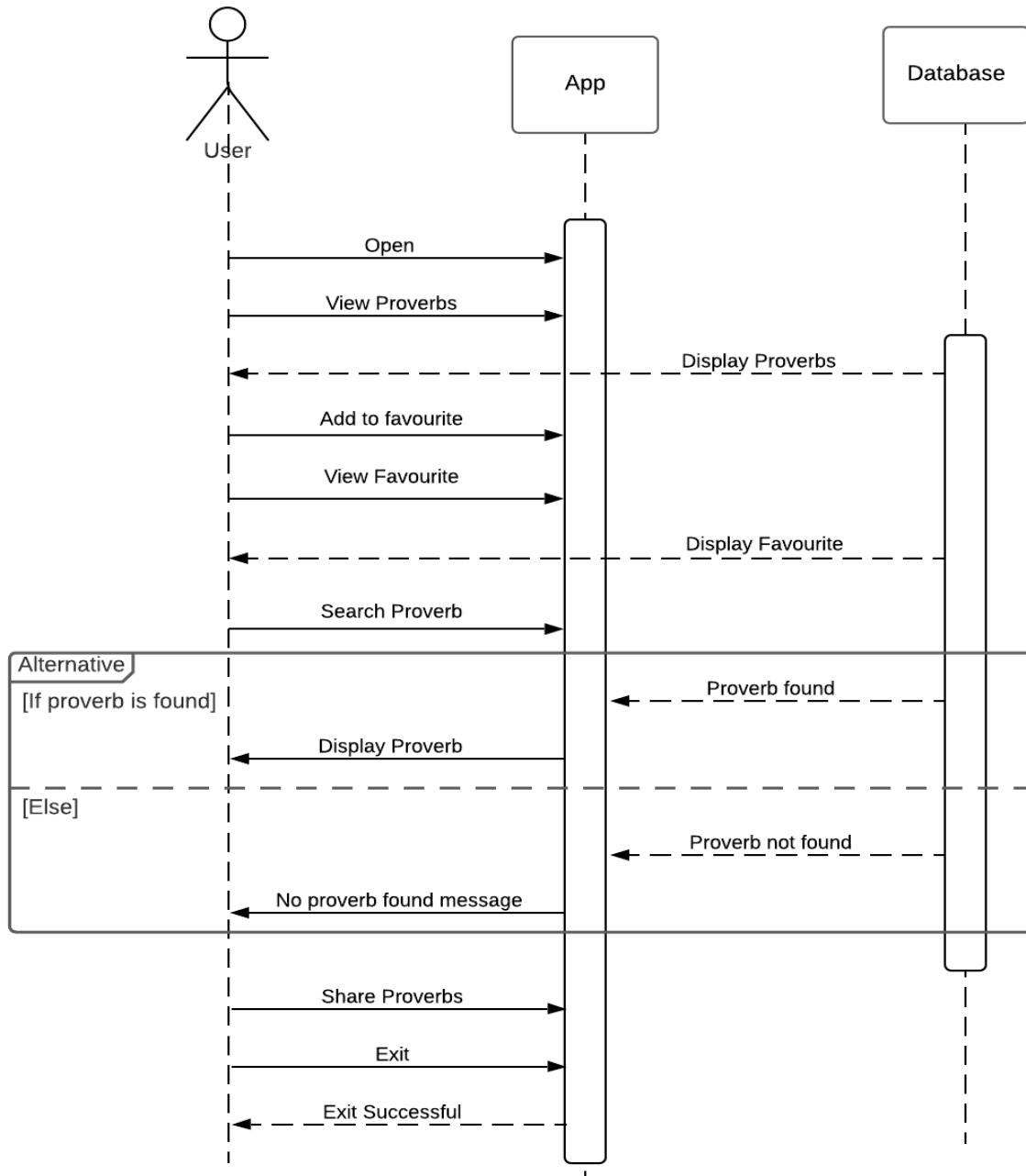
b. Sequence Diagram

Figure 2: Sequence Diagram

The sequence diagram shows the flow of the interaction on how operations are carried out. Figure 2 explains the detail logic behind the Dzongkha Proverbs application. Here, the user can view the Dzongkha proverbs with its meaning which are displayed from the database. The user can also set the Dzongkha proverbs as their favourite and view it from

favourite section. The user can search for the proverbs that are stored in the database of the app. The proverbs can be shared to others through different media platforms.
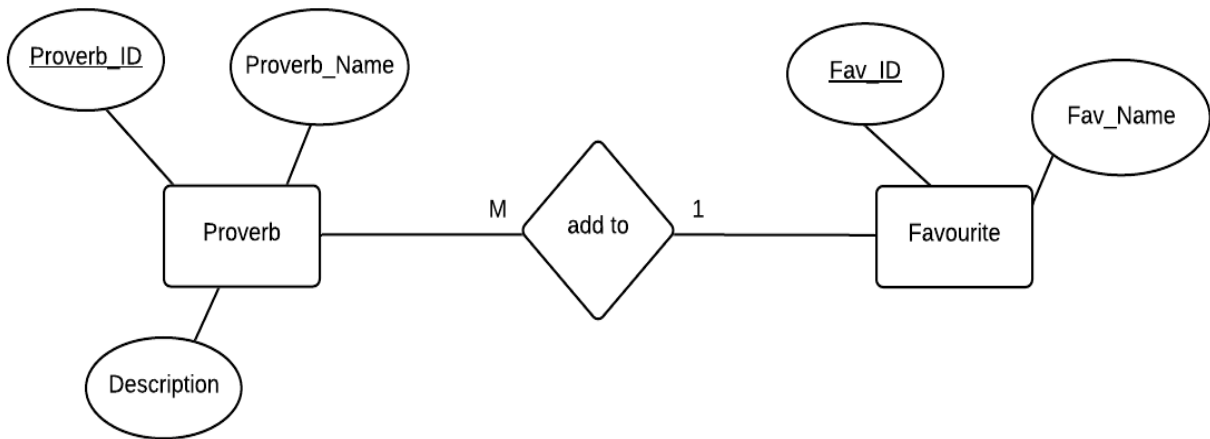
c. Entity Relationship Diagram

Figure 3: Entity Relationship Diagram

The above figure shows the entity relationship diagram of the Dzongkha Proverbs application. There are two identified entities, namely Proverb and Favourite. The attributes of Proverb entity are Proverb_ID, Proverb_Name and Description. The attributes of Favourite entity are Fav_ID, and Fav_Name. The relationship between the two entities is 'add to' and it has one-to-many cardinality ratio, i.e. many proverbs can be added to favourite.
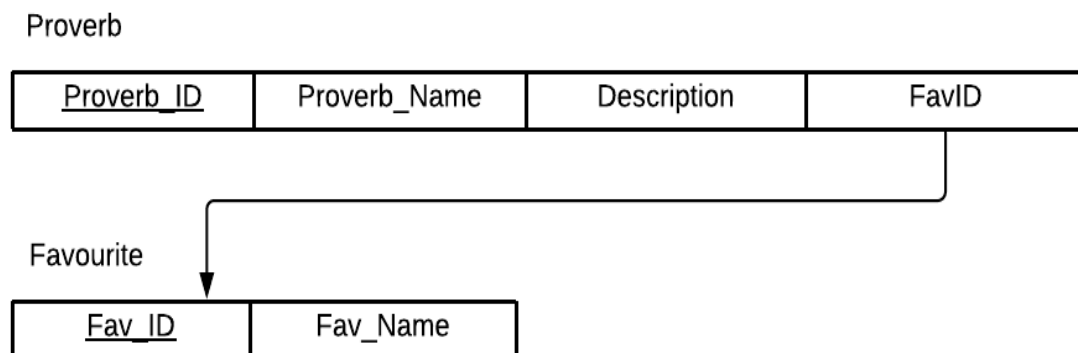
d. Relational Schema

Figure 4: Relational Schema Diagram

The above figure shows the relational schema of Dzongkha Proverbs application. Proverb and Favourite are the two tables present in the relational schema. Proverb table has Proverb_ID as primary key and Favourite table has Fav_ID as primary key. The primary key of the Favourite table is taken as the foreign key of Proverb table.